Poison Ivy!
WHERE?

By Susan M. Pajak

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Poison Ivy!

WHERE?

WHERE? Right there. You're stepping on it. When was the last time you suffered with Rhus dermatitis, or poison ivy-poisoning? Last year, last month, last week? Chances are you're going to suffer with it again, and soon, perhaps even before the day is done.

But you won't be alone. Seventy percent of the U. S. population is susceptible any time of the year, but more so in spring and summer, to various degrees of Rhus dermatitis should they come in contact with the poisonous sap. It can wreak havoc to not only the external body surface but to the delicate internal organs as well.

Follow along as we explore some facts about the poison ivy plant and explode some myths that have been hanging around much too long.

A quick description of the common poison ivy plant is "leaflets-of-three" (palmately compound), green in color and egg-shaped, usually having smooth edges though some variations of the leaf will also have deep notches. The leaflets and their stem (petiole) grow from a twig which in turn grows from the main trunk of the plant which in a mature specimen is grayish-brown and fairly thick. Poison ivy is a woody plant.

The flowers are whitish in color and the berries in the first stage are dark green; later, sometimes as early as the first of September, they turn white. They remain white during cold weather. As early as the first of September, the leaves may begin to turn lovely shades of yellow and red, which may confuse autumn foliage collectors. Who would expect such colorful leaves to be poisonous?

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MRS. JEAN HAYWARD and Mrs. Marge Carnahan examine an enormous poison ivy plant at the entrance to an archery course.

No matter what time of the year, nor how much foliage is still lingering on the plant, nor even if the twigs are stark naked, the poison ivy plant is poisonous.

The entire plant is poisonous: the flowers, berries, stems, twigs, trunk and roots. The poisonous sap is found in the resin canals of the plant. The only parts of the plant found not to be poisonous are the surface cells of the leaves and the pollen.

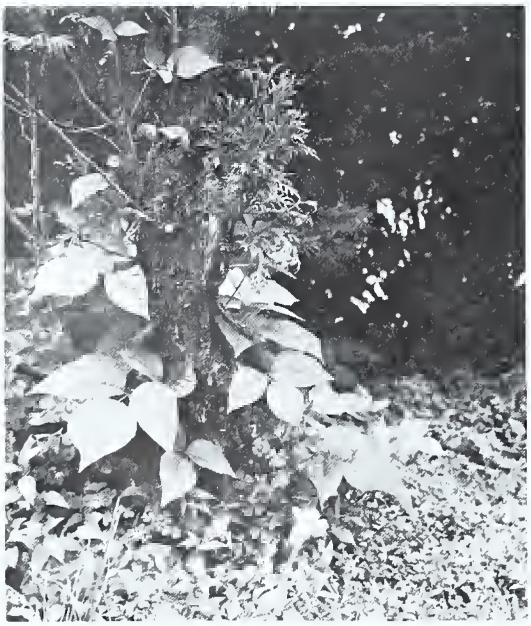
Since it is a woody plant, poison ivy continues to grow, year after year, somewhat like the nature of a tree to keep growing. Just can't seem to get rid of it! True, the leaves are gone when cold weather hits, but what remains is just as poisonous as the new growth in spring.

The proper name for the poison ivy plant is *Rhus radicans*. The moniker "ivy" is blamed on early New World writers who compared the poison ivy plant with the English ivy plant. The two are not related.

Rhus radicans is almost universal in its habitat. It has been located all over the United States save in the extreme Southwest. In Pennsylvania it can be found in Erie as well as Philadelphia, Somerset or Scranton, just to name a few cities.

Poison ivy wears many masks in that it can be a lonesome vine, a shrubby shrub, a massive covering, or a leafy costume as it slowly engages itself to a telephone pole, creeping ever upward, greedily absorbing the sunshine for its own. It holds tight to whatever it feels like by aerial roots which in most cases are rust-colored.

FRESH POISON IVY plant entwines the trunk of an ornamental bush in a churchyard of Mrs. Pajak's hometown. It's common to find the poisonous plant in such places.



Birds often drop the seeds that cause it to climb the sides of houses, over garden walls, in flower beds, or through prize hedges and ornamental shrubs. And its root system covers a lot of "underground."

Native American

The poison ivy plant is native to America, suggesting that this plant evolved millions of years ago. Most modern species of woody plants date back about five million years, and some have been unchanged since the Miocene epoch, some 20 to 30 million years ago. Evolution! Most botanists have accepted Charles Darwin's theory of natural selection, or survival of the most fit. *Rhus radicans* is a woody plant, and because of its obvious abundance it certainly seems most fit.

The poisonous sap is a milky-colored to almost-clear liquid. If exposed to air for about an hour it will turn black due to oxidation of sulfur. The milky-colored sap is sticky in nature and will adhere to most surfaces, including your skin.

What happens? According to *Contact Dermatitis* by Alexander A. Fisher, Lea and Febiger, Philadelphia, 1967, this:

"With alcohol and other solvents a crude yellow-brown viscous substance can be extracted from the sap. The residue remaining after the evaporation of the solvents is the antigenic oleoresin. The term 'urushiol' is often used for the oleoresins of the Anacardiaceae plants including the poison Rhus family.

"The active dermatitis-producing principle of the oleoresin has been shown to be related to the presence of pentadecylcatechols (PDC) which are 1,2-dihydroxy benzenes (catechols) with a 15-atom side-chain in the third position.

"The oleoresin (urushiol) of the sap of Rhus plants contains catechols which are the sensitizing chemicals.

"The eruption produced by poison ivy is an allergic eczematous contact dermatitis usually characterized by redness, papules, vesicles, and/or bullae."

There you have it. Upon further investigation it is learned that urushiol is a phenolic poison. Add a little moisture and it changes into an oil which has acid properties popularly called carbolic acid which tends to destroy animal tissue upon contact. The reaction on the skin from the poisonous sap is said to be immediate.

But what happens then is delayed hypersensitivity. More important is the fact that the sap contains an allergen factor. It is the allergen factor that determines your degree of sensitivity. After contact with the sap a reaction on the skin is noted in about 24 hours. If it was not for the allergen factor then all medical cases of poison ivy-poisoning would be alike, or in the same degree of sensitivity.

But all medical cases of Rhus dermatitis are not alike. Frightening things can happen, especially in a severe case. For one, itching. Below the skin surface in the dermis are nerve endings. This foreign body intrusion causes them to react and you then itch intolerably.

Bloodstream Carries It

The bloodstream also picks up the intruding foreign bodies and carries them to other internal organs. Your system figuratively hits the panic button. The kidneys go into high gear, trying to overcome this foreign substance, but it is possible they may become so overpowered that a severe kidney infection could occur, leading to kidney degeneration and uremic poisoning.

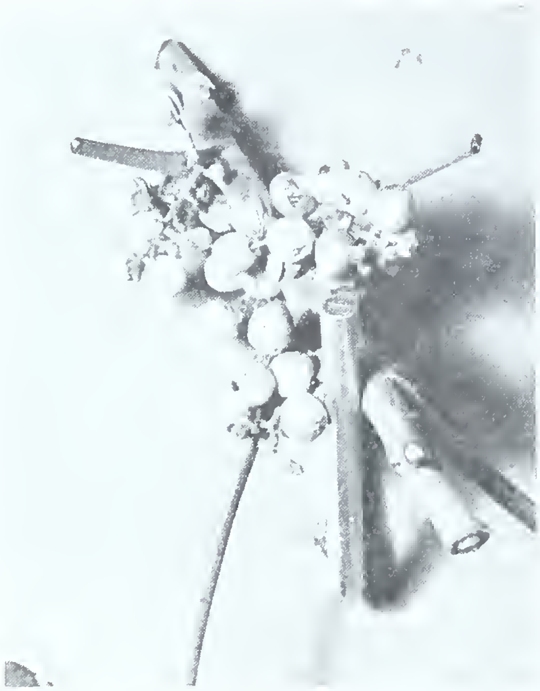
Swelling, infection, severe inflammation, blisters filled with body fluids, crustiness, loss of sleep, loss of appetite and fever are some other reasons why you should learn to recognize and avoid the plant. It is not an easy matter to suffer with poison ivy-poisoning. There are hospital records of people visiting the emergency rooms for treatment of Rhus dermatitis because "it got out of control."

AERIAL ROOTS of poison ivy plant have hair-like "fingers" that grip almost any surface, make climbing easy on pole, fence or wall.

Through all this torture, however, there does not seem to be any record of any individual expiring from it. Henry L. Verhulst, Pharmacist Director, Chief, Poison Control Center, Office of Special Health Services, Division of Direct Health Services with office in Silver Spring, Md., stated:

"I reviewed a number of texts concerning plants and did not find references to such deaths." And he adds, "Severe cases of inflammation can occur and a physician should be consulted for treatment of such symptoms."

A physician should be consulted, but how many persons really seek out their doctors when they discover they have Rhus poisoning? The reason some don't is because they concoct their own "curing" potions with whatever is handy at home—such as household



MOST BERRIES on a poison ivy plant turn white by September. The black showing on the cut ends of stems is poisonous sap.

bleach, laundry soap, or even tobacco juice. None of these truly work. There is no absolute cure for ivy poisoning.

You can contract Rhus dermatitis every time you get the sap on your body. That can be done by (1) mingling with the plant again, (2) burning it with other leaves, (3) having a carrier bring it to you. The carrier could be a family pet with the sap on its coat, garden tools, picnic accessories, hunting clothes, sports equipment or whatever. The sap can remain on an article for several years and still be poisonous.

Eating a part of the plant for so-called immunity is extremely dangerous and foolhardy. Your internal organs are at stake. *Never eat any part of this plant.* If you think that blisters on your body were caused by the poison ivy plant, get to your doctor. He will examine the affected areas and treat you accordingly with medicines that will greatly relieve it.

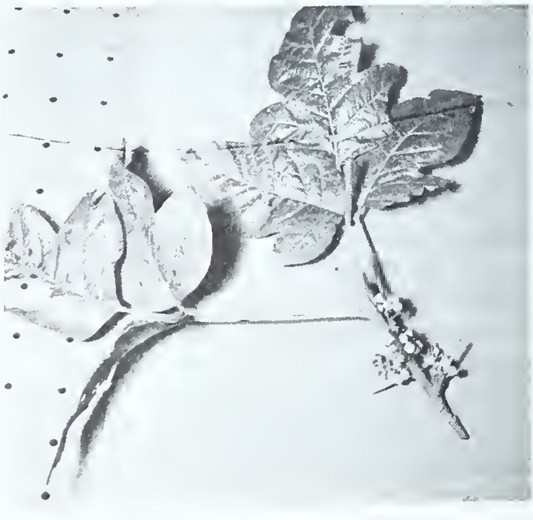
If you expect to come in contact with this plant, as early as February or March you should begin to think of receiving the specific injections (extract of the leaves) given on a one-a-week basis to reduce the severity of future Rhus dermatitis attacks. Even if you say you have never (never is a long time) contracted Rhus poisoning, you should still be careful. You do not know what can happen in the future.

The following suggestions of care have been advised to Rhus dermatitis sufferers: Keep the body clean by showering often during the day using a soap-free compound; apply one of the lotions on the market for poison ivy-poisoning; do not bandage; dress lightly and avoid exertion.

It would be somewhat tricky to remove the plant from around your house without contracting Rhus dermatitis. Since the sap is found in all parts of the plant, when one starts tearing it up, gloves or no gloves, some sap is almost bound to stick to either you or the garden tools you're using. Be careful if you tackle this job. Use a weed killer but follow label directions carefully.

For an informative and handy reference booklet on the Rhus plants send 10c in coin to the Superintendent of

IN LATE FALL, the berries have turned white, the leaves are now reddish and show signs of mutilation. Winter will soon be here.

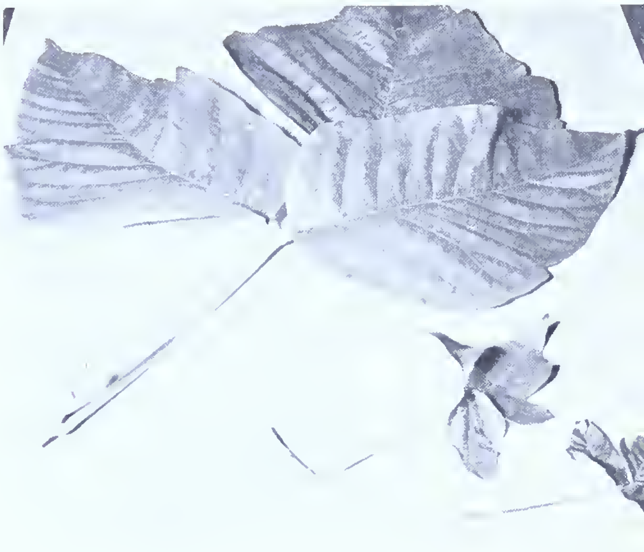


Documents, U. S. Government Printing Office, Washington, D. C. 20402, and ask for "Farmers' Bulletin No. 1972." Also discussed in this booklet are eastern oakleaf poison ivy, western poison oak, and poison sumac. All are in the Rhus family, all are poisonous.

Wild Tales

Some wild tales have been told about the so-called powers of the poison ivy plant. If they were true our existence would be rather short! This plant does not (1) spit poison, (2) emit poisonous fumes, (3) secrete a poisonous oil on its leaves. What is on its leaves is cutin, a shiny wax-like substance found in the epidermal cells which prevents underlying cells from water seepage.

Laundry soap will neither cure nor soothe the affected skin. Eating parts of the plant will not confer immunity. The only way you can get it "out of the air" is by standing too close to a trash-leaf pile containing poison ivy leaves. As they burn the sap can be carried to your skin by the drifting wind. And lastly, the pollen does not "fly up your nose" deliberately!



MATURE LEAVES of poison ivy plant grow large. The big ones here are over six inches long. The small ones were just starting to grow.

Still want to go for a stroll through the fields and woods? Go ahead. Just watch where you take a rest. After all, why do you think it was named *poison ivy*?

GLOSSARY

allergen . . . a substance causing allergy or causing it to become manifest

allergic . . . possessing allergy

catechols . . . a crystalline compound contained in catechu

catechu . . . any of several dry, earthy or resinlike astringent substances, obtained by decoction and evaporation from the wood, leaves, or fruits of certain tropical Asiatic plants

dermatitis . . . inflammation of the *derma* which is the sensitive layer of skin beneath the outer layer

eczema . . . an inflammatory disease of the skin with redness, itching and lesions.

hypersensitivity, hypersensitive . . . abnormally and excessively susceptible and/or sensitive

oleoresin . . . a natural product consisting of essential oil and resin

papules, vesicles, bullae . . . large "pimples" on the skin containing body fluids

urushiol . . . a poisonous, liquid, phenolic substance

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